

### **ABSTRACT OF THE DISCLOSURE**

A microchip-based electrospray ionization device and column with affinity adsorbents is disclosed. The invention includes a microchip array and a capillary tube  
5 or alone or attached in combination. At least a portion of the device or column has immobilized affinity adsorbents. Methods for using the device are provided as well for affinity capture of biomolecules to meet the needs for the modern life sciences such as proteomics and drug discover.